

## Comparison with Arab states:

Israel's military strength is appraised in the first of three pages reviewing the balance of power in the Middle East. The articles, charts, and lists of weapons are based on information supplied by Priscilla A. Clapp, research associate with the International Studies Division of Bolt Beranek & Newman of Cambridge, Mass.

By Joy Gerville-Réache

Staff writer of The Christian Science Monitor

**DRAW A BALANCE SHEET ON PAPER** between the armed forces of Israel and the United Arab Republic and you find that Israel has substantially fewer combat planes but holds a slight edge in armor.

Add to Egypt's arsenal the weaponry of the other Arab states bordering on Israel, and the Jewish state begins to look greatly outnumbered.

But, as the six-day war of June, 1967, proved, the paper balance sheet can be completely misleading.

The Israelis have a know-how, military skill, and ingenuity that the Arab states have so far failed to achieve.

Israel at the latest count has about 320 combat planes compared with Egypt's fleet of more than 400 Soviet-supplied aircraft.

According to President Nasser, Israel has three pilots for each of its first line planes, making it possible to fly many more sorties with a single aircraft. Egypt, on the other hand, has not enough trained pilots to man all its MIGs and Sukhois.

Moreover, the Israeli planes can carry bigger bomb loads and have more versatility in an offensive role than the Egyptian squadrons.

Most analysts agree that until the Arabs make up the lag in training, quality, and technology, the Israelis will continue to come out on top in any new round of fighting for many years ahead.

### Guerrilla action builds

However, another factor of growing significance on the Middle East scene is the rise of the Palestine Arab guerrilla movement.

The guerrillas are totally committed to the recovery of their homeland, and to the establishment of a secular Palestine state where Muslims, Jews, and Christians could live together in peace.

# Israel ahead in military know-how

Some Middle East watchers say that, in the long run, the guerrillas by their unconventional strategy may prove to be a bigger challenge to Israeli military power than the conventional Arab forces.

At the moment, the Israelis have in their hands the most sophisticated and effective multirole fighter in the Middle East: the American McDonnell-Douglas Phantom F-4E.

The Phantom can carry a bigger bomb load and has a greater combat radius than

any other comparable aircraft in this region today.

President Johnson agreed to sell Israel 50 Phantoms shortly before his term at the White House came to an end. Delivery started in July, 1969, and is going ahead at the rate of about four a month. The order should be completed by midsummer 1970.

Israel has been pressing the United States for 25 more Phantoms as well as for 80 to 100 more Skyhawk attack bombers. It asked for delivery to begin in the second half of 1971.

But Secretary of State William P. Rogers announced March 23 that President Nixon had decided not to sell Israel more combat planes for the time being. The President believes that at this time Israel's air power is sufficient for its defense needs, Mr. Rogers said. The United States would be in a position to send the Jewish state more planes promptly if there was a change in the military power balance, he added.

### All-purpose fighter

To counter the introduction of the Phantoms on the Israeli side, President Nasser is urging the Soviet Union to give him the still more advanced MIG-23 all-purpose fighter, known in NATO terminology as the Foxbat.

Many analysts doubt that the Russians would commit the MIG-23 to the Middle East at this stage.

The story of how Israel has armed itself since its emergence as a state in 1948 reads like a James Bond thriller—or series of thrillers.

• It built up a tank force by purchasing World War II Sherman tanks in scrapyards in France and Italy. It scoured the junkyards for treads and other parts for the tanks and fitted the pieces together.

• The original Israeli Air Force was assembled from a variety of rebuilt World War II planes purchased privately and de-

A company was set up in the United States to purchase a number of demilitarized B-17 and A-20 medium bombers. The planes were flown by hops to Puerto Rico, the Azores, Ajaccio, Corsica, and then to Israel.

A bogus film company bought four Bristol Beaufighters, hired crews, and began filming. When the time came for the Beaufighters to go into action, they took off and headed for Ajaccio. The aircraft were refitted for combat at a base in Yugoslavia.

At about the same time the Czechs were producing Messerschmitt-109 fighters for sale to Israel.

• An airline based on Panama called LAPSA succeeded for a while in operating as a cover for the transport of small arms from the United States to Israel. The French supplied small arms to Israel under the cover of commercial deals with a Latin-American country.

• Under secret agreements concluded between former West German Chancellor Konrad Adenauer and Tel Aviv, with tacit United States approval, West Germany has sent Israel American Patton tanks and Sikorsky helicopters, naval craft, artillery, and other weapons to a total value of about \$80 million. Twenty-four Sikorskys were loaded onto transports in northern German ports at night—two per transport.

• After Gen. Charles de Gaulle clamped down his total arms embargo on Israel in December, 1968, spare parts for Israel's many French-made aircraft reached the Jewish state by devious means.

A Swiss engineer was arrested last fall for passing to Israeli agents the blueprints of the Atar engine which powers the French Mirage-III. The engine is manufactured under license in Switzerland. The French embargo has blocked delivery of 50 Mirages to Israel, and made it difficult to service the engines of the Jewish state's existing Mirages.

• On Christmas Day, 1969, the Israelis snatched five French-built gunboats from Cherbourg harbor and sailed them to Israel. They were the last of 12 Saar class gunboats ordered by Israel from France. Five of the ships were delivered before the total French embargo was enforced. Two others escaped from Cherbourg a day or two after the embargo was announced.

### Aircraft industry grows

These fast ships will be fitted with an Israeli-made missile called the Gabriel. They are regarded as a match for Egypt's Soviet-made Komar- and Osa-class patrol

continued

boats, which are equipped with Styx missiles: The Israeli destroyer Eilat was sunk in October, 1967, by a Styx missile.

Israel is steadily building up its own aircraft industry. It has manufactured the French Fouga Magister jet trainer under license and launched an export campaign to sell these planes to African countries. Uganda has bought about 12 of them.

Under the terms of the license agreement, Israel is barred from selling the Fouga Magister to former French colonies.

Last November, the prototype of an entirely Israeli-designed light transport known as the Arava made a successful test flight.

Israel also has bought the production rights of a high-speed executive jet from the North American Rockwell Corporation.

It hopes to sell both the Arava and the executive jet abroad and thus earn hard currency to help pay for its imports of military planes, which represent a heavy drain on its budget.

The Israeli aircraft industry, which in 17 years has grown from 70 employees to nearly 10,000, also manufactures spare parts for some of the planes it purchases from abroad. The French Turbomeca Marbore engine is being produced in Israel under license.

It seems clear that Israel's goal is to develop the capability to produce military combat planes.

In the next few years Israel probably will be in a position to make a light close-support fighter and supporting transports, but it will be at least another decade before it can construct advanced supersonic fighters for combat missions.

### Atomic capability

Israel probably now has the capability to produce an atomic bomb. It is operating an atomic reactor at Dimona in the Negev Desert, about which little is known by outsiders. It is quite likely that significant amounts of plutonium from this reactor have been stockpiled.

A surface-to-surface medium-range missile known as the MD-660, being developed for Israel in France, was undergoing experimental launches in early 1968. Actual delivery of the missile has not been confirmed. The MD-660 has a range of about 300 miles and can carry a 1,000- to 1,200-pound warhead—about the size of a small atomic bomb.

The Israelis are said to consider themselves in too vulnerable a geographical position to establish nuclear forces.

But they have the option of developing nuclear independence and apparently intend to keep that option for the time being at least. Israel has not signed the nuclear nonproliferation treaty.

The weapons in the Israeli arsenal that are significant as nuclear delivery vehicles are the American Skyhawk A-4E and the Phantom F-4E as well as the MD-660 missile, if it has reached Israel.

## Israel's arsenal

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### Armed forces:

22,500 regulars, 290,000 on total mobilization

### Combat aircraft:

- 15 Vautour in reserve (French)
- 35 Ouragan in reserve (French)
- 35 Mystere IVA (French)
- 12 Super Mystere (French)
- 65 Mirage IIICJ with Matra air-to-air missiles (French)
- 46 Skyhawk A-4E (U.S.)
- 50 Phantom F-4E with Sparrow air-to-air missile and Bullpup air-to-surface missile (U.S.)
- 65-80 Fouga Magister armed jet trainers for close support (French and Israeli).

### Other aircraft:

- 30 Noratlas transports (French)
- 6 Stratocruiser transports (U.S.)
- C-47 light transports (U.S.)
- 25 Sikorsky S-58 helicopters (U.S.)
- H-13 helicopters (U.S.)
- 5 Alouette helicopters (French)
- 12 Super Frelon helicopters (French)
- OH-6A helicopters (U.S.)
- 25 Agusta-Bell 205 helicopters (Italian built under U.S. license)
- 60 Piper Cub light aircraft (U.S.)

### Missiles:

- About 100 launchers (10 to 12 batteries) for Hawk surface-to-air missiles (U.S.)
- MD-660 medium-range, surface-to-surface missiles (ordered from France, delivery not confirmed)

### Armor:

- 50-100 AMX-13 light tanks (French)
- 400 Centurion medium tanks—200 more due to be delivered early '70 (British)
- 200 Sherman and Super Sherman tanks (American and French)
- 300 M-48 Patton tanks (American)
- 120 T-54/55 tanks captured from the United Arab Republic in 1967 (Soviet)
- More than 1,500 other armored vehicles: M-113 armored personnel carriers (U.S.), AML-90 armored cars (French), and M-3 armored half-tracks (French)
- (Israel wants British Chieftain tanks but London refuses to sell.)

### Artillery:

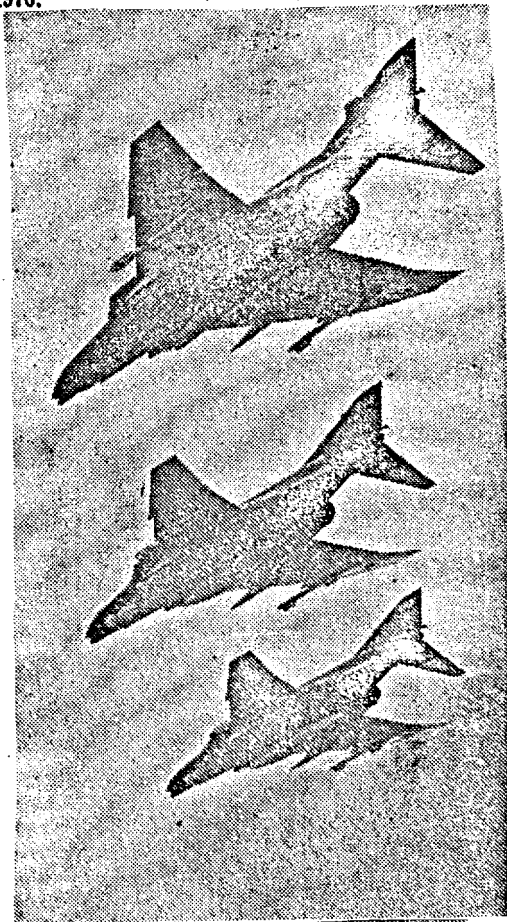
- Light weapons (French)
- Israeli-built flamethrowers and bazookas
- 20 mm., 30 mm., 40 mm., and 90 mm. antiaircraft guns (of various origin)
- Mobile antiaircraft batteries each made up of three Swedish Bofors 40 mm. guns with Swiss radar
- 106 mm. jeep-mounted recoilless rifles (U.S.)
- 60 mm. to 160 mm. mortars, heaviest mounted on vehicles (Israeli)
- New 120 mm. mortars, lightweight (Israeli)
- 105 mm. guns (U.S.)
- SS-10/11 antitank missiles on carriers (French)
- More than 250 self-propelled guns: 155 mm. howitzers on Sherman chassis and 105 mm. howitzers on AMX-13 chassis (all Israeli hybrids)

### Small arms:

- 7.62 mm. FN FAL rifle (Belgian, produced under

## **Navy:**

3 submarines (ex-British) (The submarine Dakar sank in the Mediterranean in January, 1968, but may have been replaced.)  
1 destroyer (ex-British) (The destroyer Eilat was sunk by an Egyptian missile boat in October, 1967.)  
1 escort (U.A.R., captured in 1956)  
12 fast Saar-class gunboats (built in France, equipped with Israeli-designed Gabriel missile with 3-to-12-mile range)  
1 patrol vessel (ex-U.S. submarine chaser)  
3 motor torpedo boats (built in Italy)  
6 motor torpedo boats (built in France)  
2 patrol boats (built in West Germany)  
2 patrol boats (ex-British)  
4 patrol boats (built in Japan)  
3 landing craft (Israeli construction)  
1 medium landing craft (ex-U.S.)  
1 naval vessel, probably an MTB or patrol boat, was sunk by Egyptian frogmen in Eilat harbor on Feb. 6, 1970.



By R. Norman Matheny, staff photographer

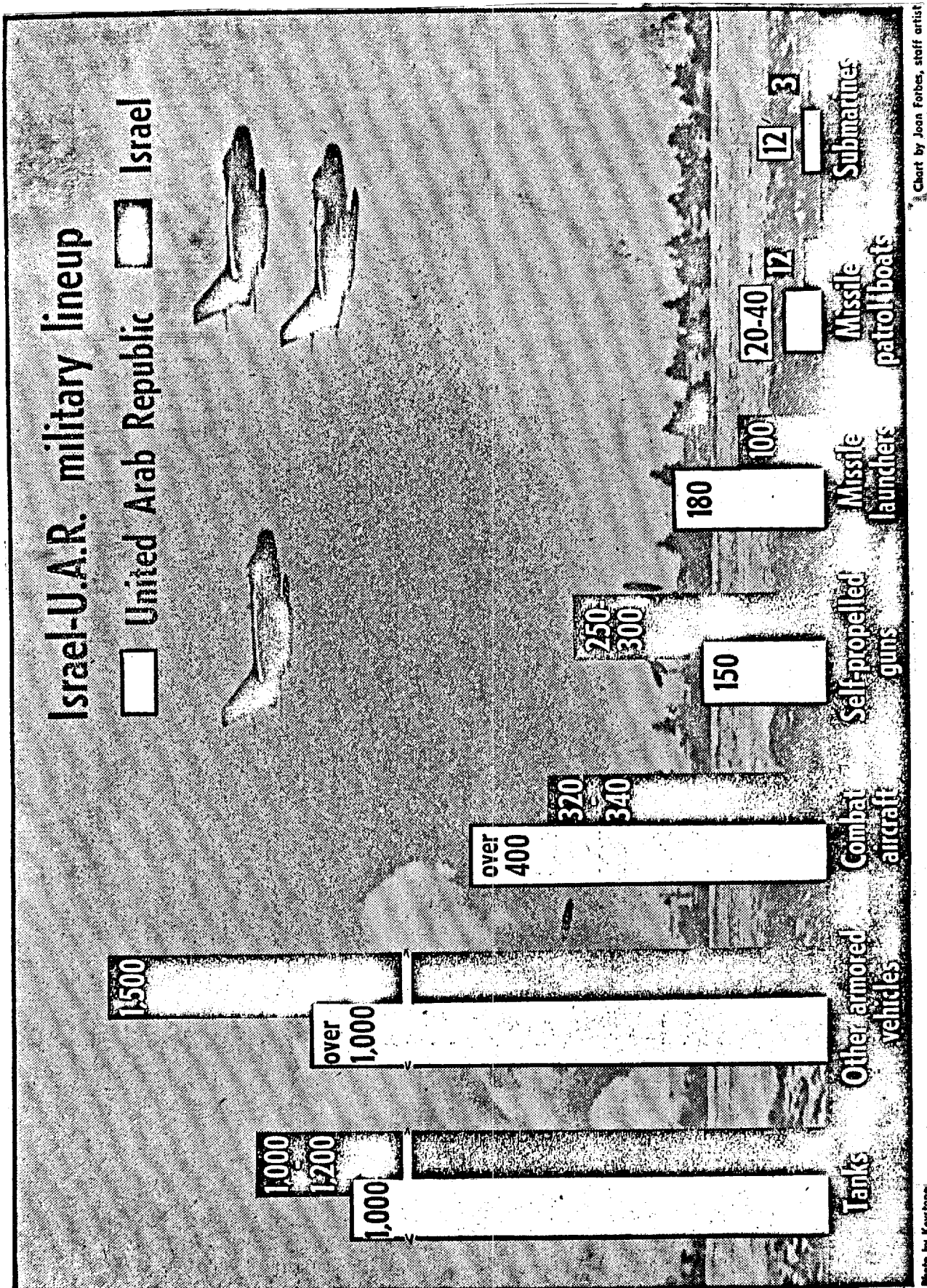


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